

Applicant: Kari Raisanen et al.
Application No.: 10/597,940
Response to Office action mailed Feb. 3, 2009
Response filed February 20, 2009

Remarks

Claims 31–62 remain pending in the application. In the Office action dated Feb. 3, 2009, claims 31–62 were rejected as being unpatentable over Grossmann et al., US Pat. No. 5,607,555 in view of Egelhof et al., US Pat. No. 5,972,168 or Kotitschke, US Pat. No. 5,914,009 or Bubik et al., US Pat. No. 5,259,929. Claims 31–62 were rejected as anticipated by or in the alternative, obvious over Turner et al., US Pat. No. 4,830,709. Claims 33–65 were provisionally rejected as nonstatutory obviousness-type double patenting as being unpatentable over claims 33–65 of co-pending App. No. 10/597,915 in view of US Pat. No. 6,342,125.

With respect to the obviousness type double patenting rejection applicant will file a terminal disclaimer in accordance with MPEP 804(B)(1) when one of the two applications has been allowed to issue.

The claims of the present application have not been rejected over 7,364,643 but if necessary applicant makes the following statement of co-ownership:

Application 10/597,940 and patent 7,364,643 were at the time the invention of application 10/597,940 was made, owned by Metso Paper, Inc., of Helsinki.

The claims have been amended to emphasize that the leading edges of the dewatering shoes do not dewater the forming webs, i.e., do not cause pulsating dewatering. This amendment is supported by ¶¶ [0043], [0045], and [0057] of the specification.

The examiner states “Grossmann et al. fail to teach the use of [a] curved shoe for the non-pulsating dewatering zone, i.e., they teach a roll or vacuum system, but do not mention a shoe.” However, the examiner maintains that Egelhof, Kotitschke, and Bubik “teach dewatering mechanisms in which a web is formed/dewatered by passing it through a curved shoe, which could include a suction member, i.e., vacuum...” However, the shoes of Egelhof, Kotitschke, and Bubik do not preform non-pulsating dewatering or have a structure arranged to preform non-pulsing dewatering.

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Egelhof et al. describes the shoe 16 with respect to FIG. 1 (col. 4, lines 11–12) as “formed of several strips 16' with drainage slits present between them.” Thus indicating that the shoe does not perform nonpulsating dewatering. The forming shoes 16 depicted in FIG. 4 and 5, clearly have the same structure as the shoes 16 depicted in FIG. 1. The figures show the shoes 16 in cross-section and the description indicates that structures 16' have cross machine direction spaces in the cross machine direction which causes pulsating dewatering—not the claimed “performing *non-pulsating dewatering* ... over a *curved cap* of at least one fixed first formation shoe located at the forward end of the two-wire stretch such that the cap engages one side of the two-wire stretch, and drawing water with under-pressure through holes or gaps which extend through the cap wherein said *holes or gaps are essentially lengthwise in the machine direction*” (claim 31, emphasis added).

In **Kotitschke** the shoes 6 of FIGS. 1, 2, 5, and 6 are positioned after the beginning of the dewatering zone, its dewatering effect is not described, but because of its location it cannot conform to the claim language of, for example, claim 31 “at least one fixed first formation shoe located at the forward end of the two-wire stretch”. Further, there is no indication that the shoes 6 of Kotitschke meet the limitations of the claimed shoe with respect to holes or gaps essentially in the lengthwise direction of the machine which extend through the cap, or perform a non-pulsating dewatering function. The shoes 6 of FIGS. 3, 4, and 7 are opposed by rigid slats 7.4, causing pulsating dewatering.

Bubik et al. in FIGS. 1–4 the first forming shoe 28' is backed by blades, foils, or foil ledges 30' which are the arrangement which applicant shows to cause pulsating dewatering. With respect to FIGS. 5–7 in which the water shoes 28' are not backed by foil ledges there is nevertheless no indication that the shoe effects non-pulsating dewatering. The shoe is labeled with the same reference number 28' and shows a machine direction profile of cross machine direction gaps. The shoes 28' must have cross machine gaps to correspond with the foil blades or foil ledges 30' and the only conclusion is that they have this feature in FIGS. 5–7 contrary to applicant's claimed “the cap engages one side of the two-wire stretch, and drawing water with under-pressure through holes or gaps which extend through the cap wherein said *holes*

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or gaps are essentially lengthwise in the machine direction” (claim 31). Further the leading edges of the shoes 28' are arranged to remove water from fiber pulp traveling in-between the formation wires.

Claims 31–62 were also rejected over Turner et al. either by anticipation or as obvious. Turner et al. provides that

The surfaces of forming shoe 22 and dewatering shoes 26, 32 can be defined in several ways. They are all designed to admit water from the web in the dewatering process and, therefore, are water pervious and foraminous in nature. *In a preferred embodiment, their surface is defined by a plurality of closely spaced, parallel foils which extend in the cross-machine direction. These foils thus define, in conjunction with the forming wires traveling thereover, a plurality of short chords which approximate a curved surface.* [Emphasis added.](Col. 3, line 66 to col. 4, line 7.)

The only other configuration of a shoe surface mentioned is with respect to 26 which is preferably blank or impervious (Col. 3, lines 50–53). So the specific shoes described by Turner are either described as the type to cause pulsating dewatering, or as impervious. Therefore Turner et al. provides no suggestion for applicant's claimed structure of openings formed by “holes or by gaps extending essentially in the lengthwise direction of the machine” (claim 46) or the non-pulsating dewatering of the method claims 31, 62. It is not a basis for either anticipation or obviousness merely because the claimed shoes are not positively excluded by the description of the dewatering shoe 22 of Turner et al. (Turner et al Col. 3, line 68 to col. 4, line 2.)

The shoe 20B in FIG. 3 is not described as differing from the shoes 22 and 22a of FIG. 1 and 2, so it is not reasonable to attach any significance to location where the twin wires appear to come together. Rather because Turner et al. describes a preferred embodiment for the shoe of the type to produce pulsating dewatering, there is no consideration and no disclosure of how to prevent pulsating dewatering at the beginning of the shoe as set forth in the amended claims.

Applicant believes that no new matter has been added by this amendment.

Applicant submits that the claims, as amended, are in condition for allowance. Favorable action thereon is respectfully solicited.

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Respectfully submitted,



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